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Special Duty Manual for Air
Raid Wardens

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State Government.

SPECIAL DUTY MANUAL

FOR

AIR RAID WARDENS

**U. S. CITIZENS DEFENSE CORPS
OF PENNSYLVANIA**



**Prepared by the
Institute of Local and State Government
University of Pennsylvania**

**For the
STATE COUNCIL OF DEFENSE
Commonwealth of Pennsylvania**

JUNE, 1942

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WARDENS GUARD THE HOME FRONT

The Air Raid Warden has a responsible war job. To a large extent, the safety of his neighbors will depend upon how well he is prepared to discharge his responsibilities, and how seriously he undertakes his duties. For these reasons, the State Council of Defense is issuing this manual of Special Duty, or advanced, instruction. It is our hope that Air Raid Wardens throughout the State will welcome this additional training, and will enter into it, with the same spirit which we are so proud to see in the young men of our armed forces.

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Executive Director

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FOREWORD

This manual is intended primarily for special duty training for air raid wardens. It is an outline summary of the material to be covered, and, as such, is useful as a handbook for wardens who have received their First Class Rating.

Special duty training is given only to wardens who have completed the required Basic Courses, as outlined in the *Instruction Manual for Basic Courses*, abstracts from which are included herewith as an appendix.

Twelve hours of the special duty training, as outlined in this manual, are allocated to classroom instruction. A minimum of twenty hours is prescribed for the problems and exercises, but the time requirements should be increased when warranted by local conditions. The combined group drill, which subsequently will be conducted under the direction of the various control center commanders, is not to be considered a part of special duty training for the First Class Rating.

This manual was prepared by John T. Hermansen, Supervisor of Civilian Defense Training, and Charles P. Cella, Jr., Assistant, both of the Training Division, State Council of Defense, on loan from the Institute of Local and State Government, University of Pennsylvania. Helpful comments on the tentative drafts were made in conferences and correspondence by the following persons actively interested in improving the air raid warden service: E. R. Bartholomew, Williamsport; Thomas V. Dowd, Philadelphia; Capt. Ralph E. Flinn, SCD; Henry D. Harral, Lower Merion Township; Edward W. Haas, Jr., Pittsburgh; John H. Leh, Allentown; Joseph LeStrange, Upper Darby; Wm. L. McLean, Jr., Philadelphia; Sergt. Wm. Ryne, Philadelphia; John H. Tyson, Upper Darby Township; and William M. Zoll, Harrisburg.

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Unit I

THE AIR RAID WARDEN SERVICE

A. Place in Civilian Defense

1. Warden is key man in civilian protection.
 - a. He performs many functions before, during, and after air raid drills and attacks.
 - b. He is the chief contact man between the Citizens' Defense Corps and the public. He instructs householders in all protective preparations, procedures and techniques, and assists them during attack.
 - c. The control center depends upon his reports of incidents.
 - d. His leadership responsibilities require a thorough knowledge of his job, sound judgment, courage, physical endurance, tact.
2. Warden Service is one of six emergency services.
 - a. A complete civilian protection organization for a community should make provision for the following emergency services: Air Raid Wardens, Fire, Police, Public Works, Medical, and Utilities. The various units of the Citizens' Defense Corps are organized under these services.
 - b. The warden service is the only entirely new service in most communities; it does not fit into any established municipal or public service.
3. All services are coordinated in control center.
 - a. The chief of the air raid warden service assists the commander.
 - b. All services are dispatched from the control center on the basis of incident reports.
 - c. Smooth functioning of civilian protection is possible only if wardens are properly trained and able to analyze and report incidents.

B. Air Raid Warden Service Is Organized on County Basis

1. The warden service is organized under county councils of defense, and is headed by a county chief air raid warden.
 - a. He is appointed by and responsible to the County Council of Defense.
 - b. His duties and responsibilities include appointing zone, sector and post wardens, or approving the appointments below zone wardens; organizing them and arranging for their training; supervising the establishment of the air raid warning system; supervising service drills.
 - c. He serves as chief of the warden service in the county control center under the direction of the commander of the county control center.

2. More populous counties are divided into zones encompassing roughly 50,000 people and in charge of zone wardens, appointed by the county chief air raid wardens.
3. Zones are divided into sectors covering about 5,000 population, under the supervision of sector wardens who are appointed by the zone warden or by the county chief air raid warden upon the recommendation of the zone warden.
4. Sectors are divided into posts containing homes of approximately 500 people. Posts are the operating units of civilian protection. In charge of each post is a senior post warden, and associated with him are from three to ten or more post wardens, depending upon the type of community.
5. Many apartment buildings, office buildings, industrial plants and other large establishments may organize separate defense corps. In such instances, building wardens perform the functions and assume the responsibilities of post wardens. They are directly responsible to the senior post wardens of the post within which the establishment is situated, unless the establishment is itself a post.

C. Control Centers Coordinate Services Throughout the State

1. In air raids, the chain of coordination runs from the State Control Center to district (where there are such) to county to local control centers.
 - a. The chiefs of the various services will communicate from one level to another only through their respective commanders.
 - b. The State Chief Air Raid Warden will communicate with county chief air raid wardens in the following way: State Chief Air Raid Warden to State Control Center Commander to county control center commander to county chief air raid warden.
2. Except during emergencies, the chief air raid wardens will operate under direction of the executive officers of their councils of defense, and will keep the executive officers fully informed of all communications.

D. Duties and Responsibilities of Chief Air Raid Wardens

1. State Chief Air Raid Warden coordinates warden service of the State.
 - a. He is responsible for supervising, through the districts and counties, the organization and full development of the warden service.
 - b. During emergencies, he will advise the State Control Center Commander.
2. District Chief Air Raid Wardens are responsible for coordinating the warden service in the counties which make up the district.

3. County Chief Air Raid Wardens direct the warden service within the county. They advise the county control center commanders on the interchange, when necessary, of warden personnel and equipment within the county.
4. Local Chief Air Raid Wardens direct the warden service under the jurisdiction of the local control center.
 - a. Where the control center serves one large municipality, the chief of the air raid warden service directs all wardens through the established chain of command: through zone wardens to sector wardens to senior post wardens to post wardens.
 - b. If the control center area encompasses more than one municipality, the chief of the air raid warden service directs the wardens of the entire area through the commanders in those municipalities.

Unit II

WARDENS' HEADQUARTERS

A. Headquarters Is Located In Safe, Convenient Place

1. Satisfactory locations for the zone, sector, and post headquarters are home basements and private garages, vacant first floor rooms of business establishments, and basement rooms of libraries, municipal buildings, and schools. Police and fire district stations should not be used as post headquarters.
2. Attention should be given to protective considerations in locating and equipping the headquarters.
 - a. If possible, the building should not be of the type built with "load bearing" walls.
 - b. Basements are satisfactory if:
 - (1) there is no danger of flooding;
 - (2) the grade is above the water, gas, and sewer mains;
 - (3) the ceiling supports are sufficient to bear the collapsible load of the rest of the building;
 - (4) there are two or more exits with direct access to the outside;
 - (5) they can be gas-proofed.
 - c. Arrangements should be made for blacking out and gas proofing.
 - d. Adequate arrangements should be made for protection against bomb splinters and flying glass.
3. The headquarters should be plainly marked. Signs may be improvised or standard ones supplied locally which identify the zone, sector, or post headquarters.

B. Headquarters Should be Equipped for Action

1. Maps of zones, sectors, and posts
The equipment of each zone, sector, and post headquarters includes a map of the area covered. For map specifications, see Unit III.
2. Furniture and equipment
A properly equipped post headquarters contains the following furniture and equipment:

A desk and sufficient chairs	Signs for roping off danger areas
Telephone	Air raid incident report forms
Other communication facilities	First aid kit
Approved gas alarm devices	Stirrup Pumps—Hand Pumps and Sprays
Gas detection devices	Sand, shovels
Approved flash lights, extra batteries	Fire extinguishers
	Additional hose, ladders
	Axes, picks, saws
	Jacks, crowbars

Battery-operated radio, if available	Blankets, stretchers
Typewriter, file case	Lanterns
Rope and stands	Set of official manuals and instructions

3. Post records

- a. Record of post personnel, including wardens, fire watchers, messengers, and any others assigned to post. Indicate which are building wardens.

- b. Post inventory

- (1) Card catalog file of residents of post area (Post Census Form, Fig. 3).

- (2) File of building inventory records assembled by post wardens (Physical Inventory Form, Fig. 2).

- c. Log book

The senior post warden is responsible for maintaining a complete record of air raid incidents within the post area. Figure 1 is a suggested form for the log book. Local officials should include on the form all services or squads which are a part of the local set-up.

C. Post Warden Needs Equipment

1. Armband, when properly trained and officially certified.
2. Heavy work gloves,
3. Steel helmet, when available,
4. Gas mask, when available,
5. Protective clothing, when available,
6. Goggles,
7. Approved flash light,
8. Report forms and notebook,
9. Warden's whistle and gas alarm devices, when available,
10. Red skin pencil or lipstick for use in indicating treatment given to casualties by marking patient's forehead with the approved symbols:

U—Urgent—requiring priority attention.

TK—Tourniquet.

T—Indicating tetanus antitoxin has been given.

H—Internal hemorrhage.

M $\frac{1}{4}$ —Indicating morphine gr. $\frac{1}{4}$ or

M $\frac{1}{2}$ —gr. $\frac{1}{2}$ given.

11. Belt-type first aid kit, when available.

12. Several five-cent pieces for use in pay-station telephones.

D. Wardens Are Assigned Duty Schedules

Senior post wardens are responsible for arranging duty schedules so that each post will be ready to receive air raid warnings and to give adequate protection in the event of air raids. Post wardens are expected to keep informed regarding their own duty schedules.

[illegible]

Unit III

GENERAL DUTIES AND RESPONSIBILITIES

A. Authority of Air Raid Wardens Is Limited

1. Air Raid Wardens derive their real authority mainly from the confidence and trust they inspire in the people.
2. Under the Air Raid Precautions Act (House Bill 24, 1942) all members of volunteer agencies have the power of peace officers for the purpose of enforcing rules, regulations and orders adopted and promulgated by the State Council of Defense, and by district, county, and local councils of defense, in accordance with the law. Such powers may not be exercised except when wearing an official armband and on active duty during an air raid drill or attack.
3. The State Council of Defense has been authorized by the General Assembly to adopt and enforce rules and regulations governing civilian air raid precautions and defense. Air Raid Wardens are expected to keep informed concerning any State rules and regulations and local ordinances or rules and regulations adopted by their local councils of defense which define or affect their authority and responsibilities.

B. Training and Drill Are Required

1. Basic training qualifies wardens for official armband

<i>Course</i>	<i>Minimum Number of Hours</i>
General Course	5
Civilian Defense Organization	
The Control Center	
Air Raid Warning System	
Blackouts	
Fire Defense A—Control of Incendiaries	3
Gas Defense A—The Civilian Gas Mask ...	2
Gas Defense B—Methods of Gas Defense	3
First Aid	10*
	<hr/>
Total	23

2. Special Duty Training Prescribed for First Class Rating
 - a. Upon completion of their basic instruction, air raid wardens will be offered special duty training, prescribed by OCD and required for First Class Rating and the black pyramid insignie.
 - b. Special duty training is designed to fit air raid wardens for the complete responsibility of a post.

* If the ten-hour course is not offered, the twenty-hour course must be taken.































PHYSICAL INVENTORY

[illegible]

3. Wardens Drill on the Job
 - a. The Chief of the Air Raid Warden Service of the control center having jurisdiction is responsible for drilling wardens on the job for their special assignments in corps drills and exercises during simulated air attacks.
 - b. When the various members of the Citizens' Defense Corps have reached sufficient competence within their own units to permit them to perform jointly with other units, the Commander of the relevant control center is responsible for arranging group practice and combined drill.

C. Warden Must Know His Territory

1. Learn all the physical details
 - a. Make complete survey of your area
 - (1) Canvass all buildings and list the characteristics of each
 - (a) Use a form similar to Figure 2 which will serve as an information check-list and will provide uniform data for each building.
 - (b) List in detail the characteristics of schools, industrial plants, institutions, theaters, churches, and other meeting places, noting when such buildings are occupied, number of persons occupying the buildings, etc.
 - (c) Note for all buildings, including residences, access doors to streets or alleys; coal chutes; freight delivery entrances; power, steam, or telephone tunnels, which might be used as an escape if the building collapses; type of construction; and use of the building.
 - (2) Note the location of all fire hydrants, fire alarm boxes, auxiliary water storage, auxiliary fire equipment stations, and regular fire stations.
 - (3) List all fire hazards, such as oil storage tanks, filling stations, lumber yards, other highly inflammable materials, firetrap houses, and weak walls.
 - (4) List safely constructed buildings which are suitable for air raid shelter.
 - (5) Note the location of police stations, police call boxes, first aid posts, hospitals, decontamination stations, road repair storage places, and the posts of other emergency services.
 - b. Enter the information on map of your area
 - (1) Zone and sector maps are supplied by the County Council of Defense. Post maps can be obtained by tracing from sector maps or by tracing or photostating fire insurance maps, or maps available through local government agencies or local real estate offices.

	Warden's Post		Bomb Crater
	Fire Watcher's Station		Roped-off Area
	Fire Alarm		Street Car Tracks
	Telephone		Double Tracks
	Air Raid Shelter		Cisterns of Water Reserves
	Gas-Proof Air Raid Shelter		Sector Limits
	Entrance to Shelter		Zone Limits
	Fire Station		Site of Gas Bomb
	Decontamination Squad Depot		Contaminated Area (for large area, blue cross-hatch)
	Repair Squad		Street Lamp
	Casualty Station		Fire Hydrant
	Decontaminating First Aid Station		Sewer Gratings
	Bomb Squad Station		Manhole
	Location of Incident (Show number in center)		Tree
	Demolished Building		Sandbags

- (2) Maps of post areas should be large enough to show clearly streets and building outlines. A scale of 20 feet to one inch is suggested.
- (3) Use standard colors:
 - (a) Black—for street and building outlines, exits, utility tunnels, post, sector and zone boundaries, streams and rivers.
 - (b) Brown—for fire hydrants, fire alarm boxes, auxiliary water storage, fire stations, auxiliary fire equipment stations.
 - (c) Red—for special hazards.
 - (d) Blue—for emergency refuge places.
 - (e) Green—for police stations, first aid posts, hospitals, decontamination stations, etc.
- (4) Use standard symbols.
- c. File building inventory data in headquarters

The data obtained in the survey of the post wardens' areas can be conveniently filed in the post headquarters by using loose-leaf binders, if large-sized forms are used, or card catalogs, if the information is recorded on 3" x 5" or larger cards. If so desired, a separate file may be kept for public buildings, institutions, meeting places, etc.
2. Make an inventory of residents in the post area
 - a. Cards may be used to record information on the occupants of each building in the post area. The post warden should visit each residence and building in the area to obtain the information and advise civilians on air raid precautions. A 5" x 8" card form (Figure 3) is recommended.
 - b. List the residents in all buildings in your post area, noting age, infirmities, and special skills.
 - (1) Note persons who will make their automobiles available in emergencies or who are willing to render other assistance.
 - (2) Note persons with special training or skills useful in air raid emergencies:
 - (a) Physicians—give specialty
 - (b) Nurses—graduate or practical
 - (c) Druggists
 - (d) Plant and building superintendents
 - (e) Building wardens
 - (f) Fire Watchers.
 - c. The information compiled by the post wardens should be cross-indexed and filed in the post headquarters.
3. Erect necessary signs and guides.

When so directed, post wardens are responsible for erecting certain standard signs and guides.

 - a. Identifying signs should be erected at post headquarters, group shelters, first aid posts, and other civilian defense depots.

- b. As many directional signs as are necessary should be provided to guide strangers during blackouts.
- c. Post wardens should report regularly, as directed, on the condition of curb painting, street painting, street lamp and traffic light covers, and so on.

Figure 3

_____ COUNCIL OF DEFENSE AIR RAID WARDEN SERVICE POST CENSUS							
ZONE No.		SECTOR No.		POST No.			
Street			House No.		Phone No.		
Type of Building: (check)		Private <input type="checkbox"/> Rooming House <input type="checkbox"/> Apartment <input type="checkbox"/>		<input type="checkbox"/> Store and Dwelling <input type="checkbox"/> Store <input type="checkbox"/> Garage	<input type="checkbox"/> Industrial Plant* <input type="checkbox"/> <input type="checkbox"/> Hospital <input type="checkbox"/>		
If Rooming House or Apartment House, State Floor No.							
Last Name	First Name	Age	Capabilities	Incapacities	Time Available	Auto	Gas Mask

ACTUAL SIZE IS 5X8"

(Reverse Side)

Last Name	First Name	Age	Capabilities	Incapacities	Time Available	Auto	Gas Mask

Remarks:

 Warden's Signature

*Note: List name of Industrial Plant

Unit IV

DUTIES AND RESPONSIBILITIES DURING AIR RAID DRILLS AND ATTACKS

A. Respond Quickly to the Alarm

Air raid warnings are ordered by the Military Commander of the 1st Interceptor Command through the air raid warning system. Ordinarily, air raid messages will follow a standard sequence from yellow to blue to red. In some instances, however, the alert may be ordered by telephoned instructions from the 1st Interceptor Command, following a white light.

1. Report immediately to post headquarters
Wardens report to the post headquarters for orders and to obtain their equipment when they receive the warning. This may be the public air raid warning because it may prove impossible or impracticable to give the Citizens Defense Corps prior warning. The public air raid alarm will not be sounded until the red light is flashed and the warden should not arouse the public until then. One warden remains at the post headquarters at all times to receive and forward messages.
2. On the public alarm, clear streets and check blackout measures
 - a. Clear the streets
 - (1) Send people to their homes or to other shelter if they cannot reach home within five minutes.
 - (2) Direct automobile operators to park along the curbs so that their cars do not obstruct emergency traffic or defense services. Leave sufficient space at fire plugs to allow free access, and to permit free movement of fire engines and firemen. Wardens must be alert for drivers who abandon their cars without parking them properly.
 - (3) Direct drivers of horse-drawn vehicles to take their horses out of the shafts and tie them where they will be best protected by buildings.
 - b. Check blackout enforcement
 - (1) Warn householders at once of any visible light. If it is not immediately turned out or covered, report it to the nearest regular or auxiliary policeman.
 - (2) Extinguish, if possible, or report to the nearest policeman any lighted shop signs or window display lights. Shop signs or watchman's lights which are left burning after a store is closed, should be controlled by an outside emergency cut-off switch which the air raid warden can operate.
 - (3) Report to the nearest policeman street and traffic lights not properly extinguished or screened.

- c. When streets are clear, lights out or screened, and fire watchers posted, take cover where you will be protected and can observe developments.

B. Keep Alert Even if No Bombs Fall

1. Guide messengers and service corps units, if they pass through your post.
2. Be alert for gas warnings.
3. Prevent people from leaving their homes or air raid shelters.
4. Do not leave your post area to assist wardens of a neighboring post.

C. Go Into Action When Bombs Fall

1. Incendiaries
 - a. Warn and assist the occupants if bombs hit buildings.
 - b. Get the fire watchers or other trained persons to deal with the bombs, if help is needed, but keep enough fire watchers in reserve to observe the fall of incendiaries and to cover with sand or dirt incendiaries which fall in streets or other open areas.
 - c. Report to the control center, by telephone or messenger, only if fire gets out of hand and fire-fighting forces are needed. Until they arrive, attempt to control the fire. If no assistance is needed from the control center, make out a regular report to be submitted to the senior post warden *after the raid*.
2. High explosives
 - a. Determine the exact location and estimate the damage.
 - b. Report to the control center, by telephone or messenger, only if assistance is needed because:
 - (1) Persons have been injured.
 - (2) Extensive fires have been started.
 - (3) Utility lines or mains have been hit.
 - (4) Highways or streets have been blocked.
 - (5) Walls or buildings may collapse and cause further damage.
 - c. If no assistance is needed from the control center, note the damage and make out a regular report form and submit it to the senior post warden after the raid.
 - d. If damage is considerable and a call for aid has been made, help the injured, evacuate people from dangerous buildings and take all other necessary action until the service crews arrive. When crews arrive coordinate their activities and help them as necessary. (Incident officers are dispatched from the control center by the commander to assist all services and groups converging upon the scene of the more disastrous incidents.)
 - e. If building is badly damaged, help civilians shut off the main gas valve in the house or other building. The main valve

is located above the gas meter on the left-hand or inlet pipe. When open, the inlet cock (or main valve) is parallel with the inlet pipe. When closed, the cock is at right angles to the pipe. Some can be closed by hand; most require a medium-sized monkey or Stillson wrench.

3. Delayed action bombs and duds
 - a. If a bomb fails to explode or an explosion cannot be detected above the crash caused by the fall, investigate at once. It may be a dud, a time bomb, or a gas bomb.
 - b. Approach cautiously. Be especially alert for gas.
 - c. If no gas is present, report the location and probable size of the bomb and damage caused by the fall. Army bomb squads remove unexploded bombs on notification from the control center.
 - d. Evacuate people in nearby houses and direct them to other shelter.
 - e. Rope off the danger area and block streets leading to the place of fall.
4. Gas bombs
 - a. If gas is detected, sound the gas alarm immediately. Wardens will be supplied with the necessary means for sounding local gas alarms.
 - b. Keep nearby residents from leaving their homes.
 - c. Identify the type of gas as accurately as possible and report its presence to the control center.
 - d. If gas alarms are sounded in neighboring posts, determine in which direction and how strongly the wind is blowing. If the alarm comes from the same direction as the wind, move toward it up to the post boundary and be ready to sound the alarm when gas is first detected. Avoid spreading a gas alarm any farther than is absolutely necessary.
 - e. When low-flying planes come over, be alert for the presence of gas which may be sprayed as well as dropped in bombs, and which collects in pools of dark brown oily liquids with many-colored surface.

Unit V

THE WARDEN'S REPORTS AND RECORDS

A. Standard Procedure Is Used In Reporting

1. Initial incident reports are submitted when aid is needed.
 - a. Report air raid incidents only when the assistance of special crews is needed from the control center. (See Unit IV). In minor incidents which can be handled satisfactorily by civilians, fire watchers, and air raid wardens, reports should be made out and submitted to the senior post warden immediately following the incident.
 - b. In all incident reporting, use a standard form (See Figure 4). Whether the incident is reported by telephone or transmitted by messenger or other means, all pertinent information should be noted on the report form as soon and as accurately as possible. Words should be printed or written legibly and only authorized abbreviations should be used. Each warden should number his messages consecutively beginning with "one." Under "Remarks" the warden should indicate clearly the seriousness of injuries, fires and other damage. The control center staff must have such information to make effective disposition of personnel and equipment.
 - c. When messages are telephoned, the information should be reported in exactly the same order as called for on the report form. This will conserve time in transmitting messages to the control center where the telephonists must jot down the information on the "in-message" form. All messages should be written out before they are telephoned.
 - d. When wardens' messages are telephoned, the report should begin with the words "Air Raid Message" and end with "Message Ends."
 - e. The channel of communications for transmitting air raid wardens' messages to the control center will be determined. The post warden should keep ready at hand all the telephone numbers he may need in reporting.
2. Supplementary reports are follow-up reports.
 - a. Supplementary incident reports are calls for additional assistance following the initial incident report.
 - b. Supplementary reports are routed through the same channels as initial incident reports.
 - c. Supplementary incident reports are to be made on the wardens' message form in the same manner as initial reports. Whether the message is telephoned or written, the warden should indicate whether the report is initial or supplementary.
3. Final incident reports are made after raid
 - a. When an incident is closed, wardens prepare a final com-

Figure 4

AIR RAID INCIDENT REPORT

Message No. _____ Warden _____

Date _____ Zone _____ Sector _____ Post _____

Location of Incident:

Type of Bomb: Incendiary ☐ Gas ☐ H. E. ☐

Unexploded ☐ Location _____

Casualties: Approximate no. _____

No. serious injuries: _____

Any trapped under wreckage? Yes ☐ No ☐

Fire: Yes ☐ No ☐; Under Control: Yes ☐ No ☐

Damage to Utilities: Water ☐ Gas ☐ Sewers ☐ Electric Cables ☐

Roads Blocked (specify):

Time Incident Occurred _____ M.

Services on Hand or Coming:

Remarks:

Initial Report ☐ Supplementary Report: 1st ☐ 2nd ☐

plete report on the Air Raid Warden Message form for each incident, whether or not assistance was needed from the control center.

- b. The information contained in final incident reports will be recorded in the log book at the post headquarters.
- c. Final incident reports are then cleared through the Air Raid Warden Service and filed permanently in the control center.

B. Messages Are Transmitted By Telephone or Messenger

1. Telephones

- a. The principal means of communication in air raid emergencies is the telephone, but alternate communication facilities are also essential.
- b. Every warden headquarters should be equipped with at least one telephone. Persons should be assigned to receive and forward messages by telephone at all times during emergencies.
- c. If possible, non-essential private telephones in each post area should be reserved for use by air raid wardens during air raid emergencies. Arrangements should be made to assure wardens the use of at least one telephone in each block at all hours of the day and night.

2. Messengers

Messengers will be assigned to wardens' posts for use in transmitting air raid messages. In addition to the auxiliary messenger corps, it is advisable to have an emergency messenger service equipped with bicycles, automobiles, or, in some communities, horses, to keep up communications if other facilities fail.

3. Police communication systems, amateur radio

Some communities have arranged to use police communications systems and have organized amateur radio operators in anticipation of using them for air raid communications. The Federal Communications Commission has authorized the use of two-way radio, under certain restrictions, for use in civilian defense, especially between control centers and air-raid incidents. Details of the authorization procedure will be distributed, when available.

Unit VI

LEADERSHIP

A. Instruct Householders and Storekeepers in Methods of Self-protection.

1. Hold meetings to explain:
 - a. Blackout techniques,
 - b. Methods for controlling incendiary bombs,
 - c. War gases and protection against gas attacks,
 - d. Duties and responsibilities of the citizenry during blackouts and air raids,
 - e. Functions of the Citizens Defense Corps during blackouts and air raids,
 - f. Operating procedure during an incident.
2. Hold demonstrations or notify citizens of other official demonstrations.
 - a. Charts and films can be used.
 - b. Speakers can be obtained through the Speakers Bureau of the S.C.D.
 - c. County-wide or city-wide mass meetings and demonstrations should be publicized.
3. Supervise air raid preparations in the home.
 - a. Inspect, upon request or after getting permission, homes for fire hazards and necessary equipment, using recommended form shown in Figure 5.
 - b. Advice on organization of members of household into an air raid team.
 - c. Caution against last-minute preparations; explain possibility of water supply being disrupted by air raid.
 - d. Caution against use of telephones during air raids.

B. Explain To Householders Procedure for Obtaining Assistance of Citizens Defense Corps.

1. Caution against reliance on regular municipal services.
2. Point out location of post headquarters, and probable point of contact with air raid warden.
3. Emphasize importance of self-protection.
4. Caution against reliance upon telephone service.

C. Develop spirit of cooperation among the people.

1. Inspire confidence in Citizens' Defense Corps
 - a. Be well informed on civilian defense: read carefully the *Instruction Manual for Basic Courses*; attend meetings; consult publications in your zone library of civilian defense materials (set up by County Director of Civilian Defense Schools); clip official announcements from newspapers.
 - b. Demonstrate an attitude of helpfulness; avoid officious manner and pressure techniques.

Figure 5

WARDEN'S HOUSEHOLD INSPECTION REPORT

Householder _____ Warden _____ Date _____
 Address _____ Zone _____ Sector _____ Post _____

I. GENERAL

1. Have blackout arrangements been made in at least one room? Yes___ No___
2. Do household members know air raid and blackout regulations? Yes___ No___
3. Do all adults know where to call for assistance during raids? Yes___ No___
4. Do all adults know the location of the Post Headquarters? Yes___ No___
5. Does household emergency equipment include first aid materials? Yes___ No___

II. INCENDIARY BOMB PRECAUTIONS

A. ATTIC

6. Has attic been cleared of all readily combustible materials? Yes___ No___
7. Could a fire bomb in any part of attic be reached readily? Yes___ No___
8. What access is there from top floor to attic? Stairway___
 Ladder___ Trapdoor but no ladder___
9. Is there a trapdoor from attic to roof? Yes___ No___
10. If there is no attic but there is roof space between roof and ceiling, is there any access to it? Yes___ No___
 Specify _____

B. EQUIPMENT

11. Check items of equipment which are readily available and in an easily accessible part of house. Indicate number where possible.
- | | |
|---------------------------|----------------------|
| Dry Sand _____ | Containers for _____ |
| Sand Bags _____ | Water Reserves _____ |
| Buckets _____ | Heavy Blanket _____ |
| Long-handled Shovel _____ | Hatchet or Axe _____ |
| Stirrup Pump _____ | Heavy Gloves _____ |
| Garden Hose _____ | Smoked Glasses _____ |
| Fire Extinguisher _____ | Flash Light _____ |

C. TRAINING IN METHODS OF CONTROL

12. How many people are available to fight incendiary bombs? _____
13. Have duties been assigned to each member of the household? Yes___ No___
14. How often have household drills been held? _____

III. REFUGE ROOM

15. Has one room been designated the refuge room? Yes___ No___
16. Where is it? Basement___ 1st Floor___ 2nd Floor___ Garage___
17. How many windows has it? _____ Are they properly protected against concussion and blast? Yes___ No___
 What materials have been used? _____
18. Are the ceiling supports sufficient to bear the collapsible load of the rest of the building? Yes___ No___
19. Can walls withstand considerable concussion and blast? Yes___ No___
20. Have blackout arrangements been made? Yes___ No___
 What materials have been used? _____
21. Have gas-proofing measures been taken? Yes___ No___
 If room is not gas-proofed, which of the following materials are readily available? Newspapers___ Hammer and Nails___
 Blankets___ Oil Cloth___ Scotch Tape___ Flashlight___
22. How many exits? _____ Are air-lock doorways provided? Yes___ No___

2. Encourage constructive competition.
 - a. Complete preparation for air raid emergencies should be matter of pride and distinction.
 - b. Wherever possible recognition should be given to householders who have invited inspection and have rated high in preparation.

PROBLEMS AND EXERCISES

The following problems and exercises are a part of Special Duty Training. They should be directed and supervised by the Chief of Air Raid Warden Service in the Control Center which has jurisdiction over the area, or by someone designated by him.

I. Post geography.

Prepare a physical inventory, a census of post residents, and a map of patrol area in conformity with specifications prescribed in Unit III, C.

II. Patrol

Schedule all-night patrol watches and assign wardens to shifts of two to four hours each. These drills can progress from post drills to sector or zone drills under conditions of an air raid warning. Sector wardens should patrol their areas and supervise post wardens' activities, and report to the zone wardens. (During practice blackouts, wardens should be on duty checking blackout enforcement, directing persons in the street to shelter, etc.)

III. Incident Procedure

Drill wardens in all phases of incident procedure under simulated air raid conditions: (1) Action at location of incident: aiding injured, directing evacuation, control of fire bombs, etc.; (2) Incident reporting: using proper forms and established chain of communications by telephone and by messenger; (3) Cooperation with and coordination of services at incident. Confine incident drills to the Air Raid Warden Service

Note: Combined drill, involving all or a combination of corps units will be directed by the control center commander, and is not a part of special duty training.

BIBLIOGRAPHY OF SUPPLEMENTARY READINGS

Pennsylvania State Council of Defense (Prepared by Institute of Local and State Government, University of Pennsylvania): *Instruction Manual for Basic Courses*, U. S. Citizens' Defense Corps of Pennsylvania. March 1942.

U. S. Office of Civilian Defense: *A Handbook for Air Raid Wardens*. December 1941.

Air Raid Precautions Act, Pennsylvania House Bill 24, 1942.

Rules and Regulations of the Pennsylvania State Council of Defense (as available).

Local ordinances.

Rules and Regulations of local, county, and district councils of defense (as available).

APPENDIX

Brief abstracts of the more important working materials covered in the Basic Courses are included in the Appendix. These are by no means a satisfactory substitute for the detailed material in the **INSTRUCTION MANUAL FOR BASIC COURSES**. They are intended to serve merely as quick references for review purposes. Copies of the **INSTRUCTION MANUAL FOR BASIC COURSES** are available for all persons in supervisory positions.

CIVILIAN PROTECTION ORGANIZATION

CITIZENS' DEFENSE CORPS PROTECTS CIVILIANS

The citizens' defense corps performs the line or action function of civilian protection in air raid emergencies. These service squads are the units operating in the field during air raids to protect civilian life and property.

The basis of civilian protection organization is the existing municipal government. Police, fire, and public works functions are usually assigned to those municipal departments. The emergency medical services may be organized under the Department of Health. Thus the emergency services, except for the Wardens Service, merely supplement or reinforce the regular peace-time municipal functions.

COMMANDER DIRECTS CIVILIAN PROTECTION OPERATIONS

The commander has full control over the operations of the civilian protection organization during periods of air raid emergency. The chiefs of the emergency services, Fire, Police, Wardens, Medical, Public Works, and Utilities, are subject to his direction.

The operations of air raid wardens and auxiliary service units are coordinated through the control center. Air raid wardens are responsible for calling the control center when there is need for the assistance of service units. The commander, with the aid of his staff and the chiefs of emergency services, dispatches the necessary units and maintains control over their distribution.

SIXTEEN UNITS COMPRISE CITIZENS' DEFENSE CORPS

Twelve of the sixteen citizens' defense corps units provided for by OCD are organized into six emergency services: Fire, Police, Wardens, Medical, Public Works, and Utilities. In addition, staff workers, messengers, and drivers are assigned to the control center and are at the disposal of the commander. Variations in civilian protection organization exist among Pennsylvania communities. In urban centers, a more or less complete organization is needed and is provided. In smaller communities, maintenance of all 16 corps may not be necessary; in some cases, the functions of several corps units have been or will be consolidated.

The following is an outline of the duties and responsibilities of the various corps.

1. Air Raid Warden Service

Air Raid Wardens. Observing lights showing during a blackout and warning occupants of buildings; calling attention of law enforcement authorities to failures to comply with blackout rules and regulations, and requesting their cooperation in obtaining such compliance; directing persons in the streets to shelter; reporting to the Control Center any fallen bombs or fire; assisting in fighting incendiary bombs; detecting and reporting to the Control Center the presence of gas; administering elementary first aid; assisting victims in damaged buildings.

Fire Watchers. Standing guard on posts in doorways, on roofs and at other vantage points in order to spot, reach and extinguish fallen bombs.

Emergency Food and Housing Corps. Providing food and shelter for persons whose homes have been destroyed or damaged by air raid or other disaster; assisting local welfare departments.

2. Emergency Fire Service

Auxiliary Firemen. Assisting regular fire-fighting forces, including laying hose relays and operating small pumpers under the immediate direction of the local fire chief.

Rescue Squads. Rescuing persons trapped in debris; shutting off broken gas, electric and water lines; shoring up, tunneling and minor demolition work; rendering emergency first aid; assisting local public works, fire and other municipal departments.

3. Emergency Police Service

Auxiliary Police. Enforcing emergency restrictions on lighting and prohibitions on trespassing; guarding of docks, buildings, bridges and factories; performing traffic duty to facilitate movements of essential vehicles; preventing looting of partially demolished buildings, shops and homes; assisting air raid protection services before, during and after a raid; and generally assisting the regular police force under the immediate direction of the local police chief.

4. Emergency Medical Service

Medical Corps. Proceeding to scene of air raids or other disasters and setting up casualty stations; establishing advance first aid posts; rendering emergency care of the injured; assisting local hospitals and health departments.

Nurses' Aides Corps. Assisting nurses in wards and out-patient clinics of hospitals; assisting emergency medical field units in casualty stations and first aid posts.

5. Emergency Public Works Service

Demolition and Clearance Crews. Removing rubble and debris from streets after air raids; destroying partially demolished or unsafe walls and buildings; filling bomb craters in streets; assisting the local public works department.

Road Repair Crews. Repairing roads after air raids to restore normal flow of traffic as rapidly as possible, including smoothing road surfaces, repaving with available material, restoring road markings filling holes and applying top dressing; assisting street departments and public works departments following rough clearance by Demolition and Clearance Crews.

Decontamination Squads. Effecting chemical neutralization of streets, walls and buildings contaminated by gases; assisting health department in connection with decontamination work.

6. Emergency Utilities Service

Utility Repair Squads. Repairing water, gas, electric, telephone, steam and other utility services damaged by air raid or other disaster.

7. Staff Group

Staff Corps. Serving in an administrative capacity in civilian protective work in the Washington Office or any Regional Office of the Office of Civilian Defense; commanding or directing the local units of the Defense Corps in the protective services engaged in civilian defense; acting as local Bomb Reconnaissance Agents.

Drivers Corps. Driving vehicles to assist other units of the Defense Corps.

Messengers Corps. Performing messenger service for air raid warden posts, control and message centers, hospitals, casualty stations and first aid posts, fire stations and police stations, and other units of the Defense Corps.

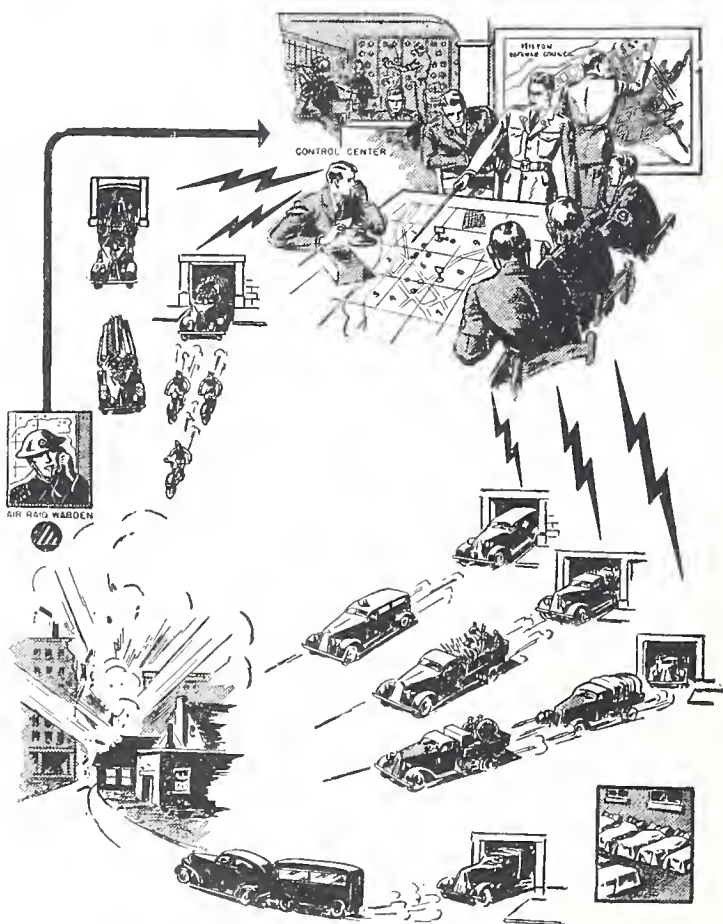
THE CONTROL CENTER

In air raid emergencies the field operations of the Citizens' Defense Corps are directed and coordinated through a system of control centers.

The "Nerve Center" of Civilian Protection

The control center is the nerve center of civilian protection in action. When air raid incidents occur, messages are immediately dispatched to the control center by the air raid wardens. As the information contained in these reports is assembled and plotted on the control map, the Commander sends his forces into action where needed. Fire forces are dispatched to the fires started by incendiary bombs. Rescue Squads and Medical Units speed to the scene to help the trapped and the

THE WARDEN REPORTS

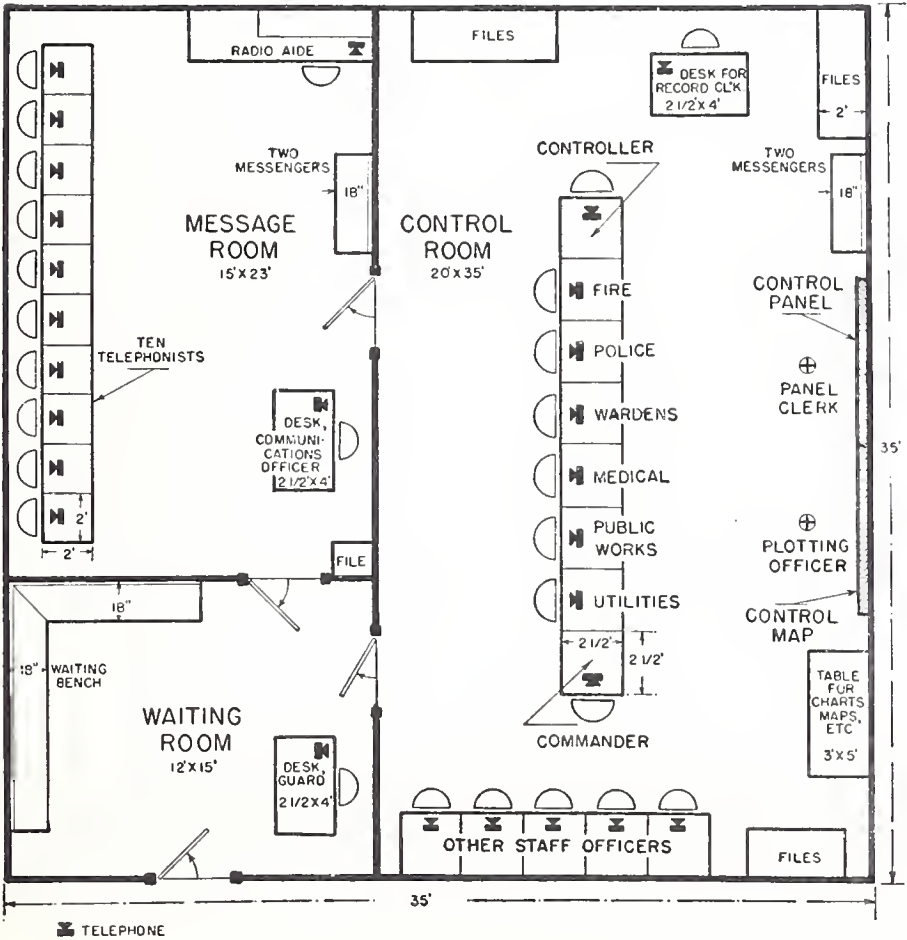


injured. Demolition and Clearance Crews, followed by Road Repair Crews, clear away debris and reopen streets to traffic. Utility repair squads repair broken cables and mains. Meanwhile, the air raid wardens, fire watchers and auxiliary police are operating in the field—aiding civilians, controlling incipient fires, and preventing looting and sabotage.

Commander and Staff Direct Operations

Assisting the Commander, who is appointed by the relevant council of defense to assume full charge of civilian protection during air raids, is his staff. Seated at the control table are the chiefs of the six emergency services—wardens, fire, police, medical, public works and utilities—who advise the commander on service units available and service units to be dispatched to the scene of incidents. The staff also includes a controller, communications officer, plotting officer, panel clerk, records clerk, messengers and telephonists.

**TYPICAL ROOM LAYOUT OF CONTROL CENTER
SERVING A POPULATION OF 100,000**



BLACKOUTS

Army Orders Blackouts

Blackouts are ordered only by the U. S. Army. Orders for alerts and blackouts in Pennsylvania are issued by the Commanding Officer, 1st Interceptor Command, and are transmitted to civil authorities through the Aircraft Warning Service.

"Blackout" means that lights are extinguished, covered, or shaded to prevent identification of targets and to prevent the use of lighted streets or areas as reference points for locating assigned targets and military objectives.



DO NOT run when an raid warnings sound after dark during blackouts.



Use your flashlight as little as possible, if at all. Never point it upward nor at any object that might reflect upward.



Know where you want to go and how to get there. Keep to the right.



Keep pets on leash if you take them out after dark.



If you are hurt, move to the nearest wall and ask the first persons who come along to report your injury to the nearest first aid station.



If you are not familiar with the neighborhood, ask someone who is or report to the first policeman or air raid warden.

BLACKOUT BEHAVIOR

Specific blackout restrictions are determined by the army and civilian defense authorities but the following regulations are generally applicable:

Street lights are fitted with low-watt bulbs and covers that diffuse the light horizontally.

Automobile headlights are hooded and covered except for a small pair of slits. The officially approved blackout device has not yet been announced.

Traffic lights are hooded and covered except for small slits.

Buildings must be equipped with opaque coverings for windows and

AIR RAID WARNING SYSTEM

Army Detects Enemy Raiders

The air raid warning system is operated by the Military Aircraft Warning Service and the Civilian Air Raid Warning System. The Aircraft Warning Service has been organized by the Combat Command of the U. S. Army Air Forces to detect and report the approach of enemy airplanes, to enable our fighting planes to attack the hostile raiders and to enable the military authorities to warn communities in the path of invading bombers. The Civilian Air Raid Warning System gives warning by messages and signals of the approach of enemy aircraft so that each locality can mobilize its civilian protection forces to meet the challenge.

Air Raid Information Is Relayed

The 1st Interceptor Command area, which includes Pennsylvania, is divided into air defense regions, each with a command post or information center. Air defense regions are subdivided into two or three smaller areas, each with a central communications point known as a filter center. Each filter center area is in turn subdivided into smaller areas, each with an observation post manned by civilian observers. Stationed in the information center is a civilian air raid precautions officer who transmits air raid messages to warning districts threatened by the raiders. The warning district centers in turn relay the signals to the control centers which alert the civilian population when necessary. doors. All outside lights and inside lights visible from the outside must be extinguished or properly covered. Paint, heavy curtains, light baffles or screens may be used.

Householders Black Out Refuge Rooms

Every householder is responsible for preparing at least one room for use during blackouts. All windows and skylights in occupied rooms should be darkened by using blinds, thick drapes, special screens, or even blankets. Lights in other rooms should be extinguished. Lights near outside doors should be screened so that no light is visible when the door is opened.



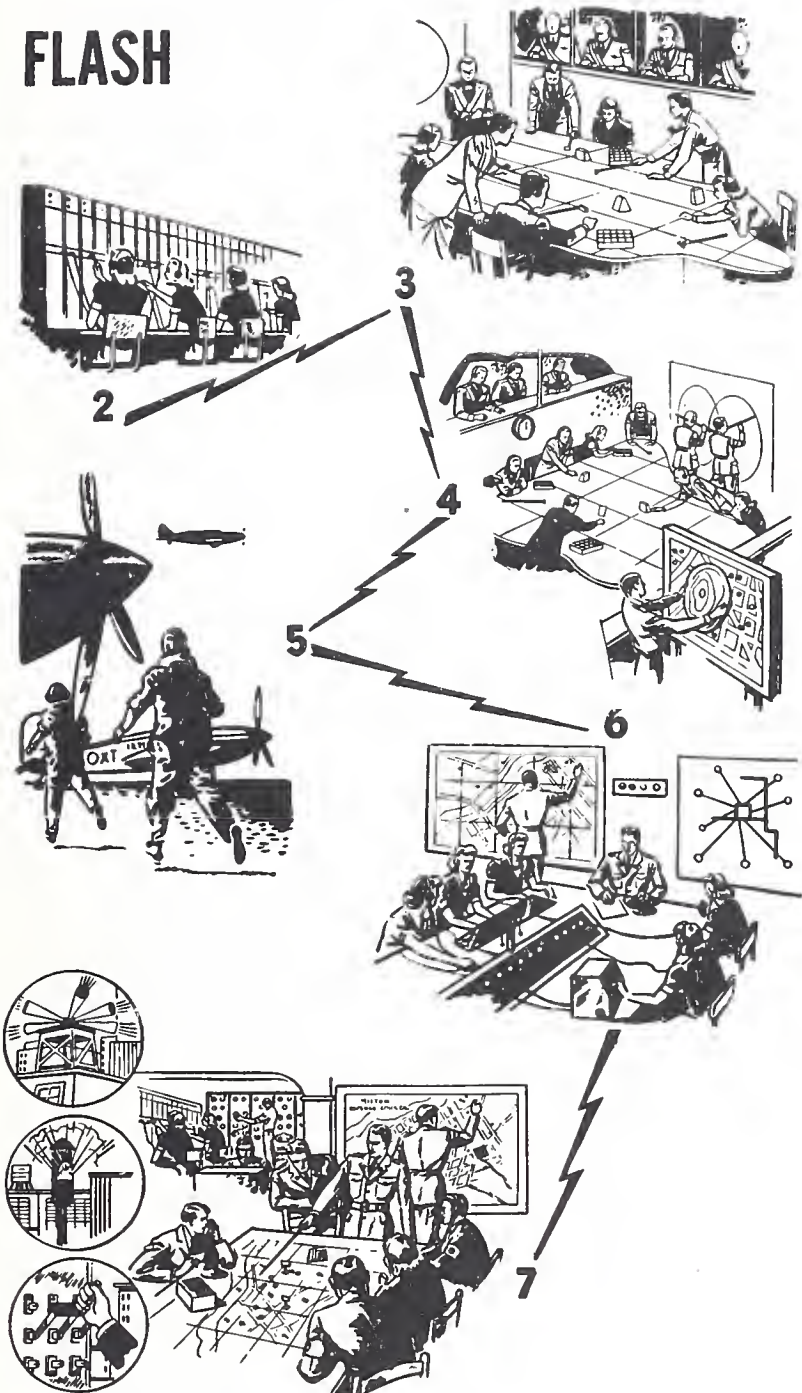
ARMY

When an observer sights a group of hostile planes, he picks up his telephone (1) and says *Army Flash*. The Central Operator (2) at once connects him with the assigned Filter Center (3) to which he reports the type of planes, number, height, and direction of flight. When several reports agree, watchers transmit the data to an Information Center (4) where developments over a large area are plotted on a huge map.

Watching the map, Air Corps officers order interceptor planes into the air, (5) direct them to contact with the enemy; another officer notes the cities threatened and flashes a yellow, blue, or red alarm, according to the degree of danger, to the proper Warning District Center (6).

At this point, Civilian Defense takes over from the Air Corps, telephones the warnings to Control Centers (7) within the Warning District. And here the Commander of the local Citizens' Defense Corps orders the alert, has the public warning sounded, usually short blasts on air horns, power horns or steam whistles or on the wailing sirens—and if the bombers arrive overhead, directs the operation of passive defense.

FLASH

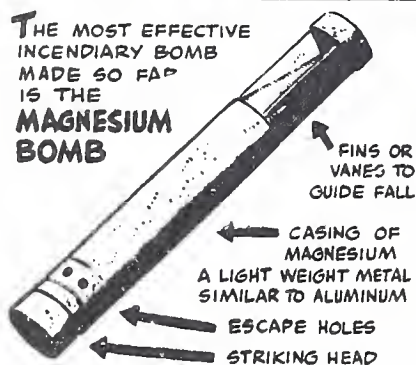


CONTROLLING FIRE BOMBS

The chief danger of an incendiary bomb attack is the probability that a large number of fires may occur at the same time over extensive areas. The largest bombers can carry 2000 or more magnesium

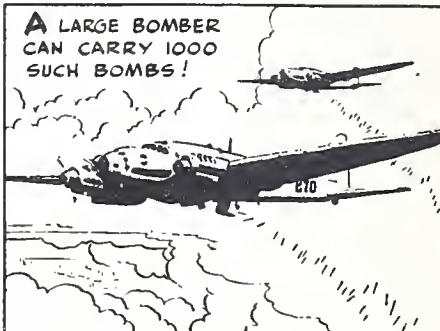
HOW THE MAGNESIUM BOMB WORKS

THE MOST EFFECTIVE INCENDIARY BOMB MADE SO FAR IS THE **MAGNESIUM BOMB**



LENGTH, ABOUT 14" WEIGHT, 2.2 POUNDS

A LARGE BOMBER CAN CARRY 1000 SUCH BOMBS!



THEY ARE USUALLY RELEASED 20 TO 50 AT A TIME, SPREAD LIKE SHOT BEFORE STRIKING.

DROPPED FROM A HEIGHT OF 20,000 FEET, THEY DEVELOP ENOUGH FORCE TO PENETRATE AN AVERAGE ROOF...



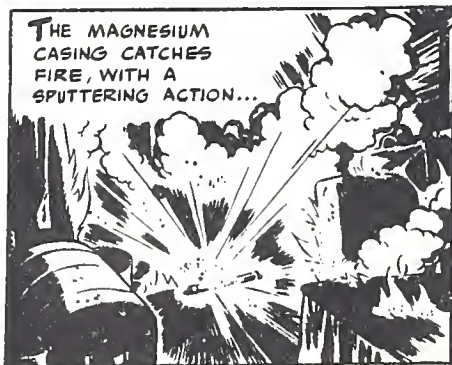
...THUS, THEY USUALLY START BURNING IN A TOP STORY OR ATTIC

THE THERMITE FILLING OF IRON OXIDE AND FINELY DIVIDED ALUMINUM IS THEN IGNITED AND DEVELOPS A FIERCE HEAT OF **OVER 4500 DEGREES!**



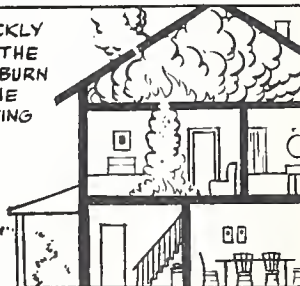
THE FLAME ROARS OUT OF THE ESCAPE HOLES.

THE MAGNESIUM CASING CATCHES FIRE, WITH A SPUTTERING ACTION...



...FLAMING MOLTEN METAL IS THROWN ABOUT AND SURROUNDING INFLAMMABLE MATERIAL CATCHES FIRE

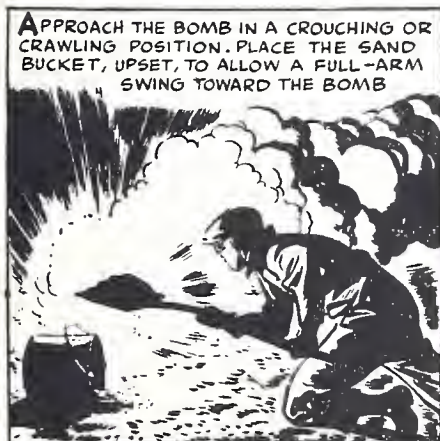
IF NOT QUICKLY QUENCHED, THE BOMB WILL BURN THROUGH THE FLOOR, SETTING ADDITIONAL FIRES ON THE FLOOR BELOW...



BUT, WITH PROMPT ACTION AND SIMPLE TOOLS, A MAGNESIUM BOMB CAN BE QUENCHED!

bombs. In the average city, about one-sixth of the bombs can be expected to hit buildings. On this basis, a single bomber is capable of starting more than 300 fires. Since incendiary attacks are executed by squadrons of planes, there is always grave danger of widespread conflagration.

CONTROLLING WITH SAND



Magnesium Bomb Is Most Effective

Many types of incendiary bombs are in regular use, but the most effective and the most frequently used is the 2.2 pound magnesium

CONTROLLING WITH WATER

TO FIGHT A BOMB WITH WATER, YOU NEED TWO MEN AND SPECIAL EQUIPMENT. REMEMBER, YOU CAN'T PUT OUT THE BOMB — YOU FEED IT WATER, TO BURN OUT!

ONE MAN PUMPS 80 STROKES A MINUTE TO KEEP A STRONG ENOUGH PRESSURE TO THROW A JET 30 FEET, AS SPRAY, 15 FEET. ONE MAN FIGHTS THE FIRE.

YOU USE UP A BUCKET IN 1½ MINUTES

SPECIAL DOUBLE ACTION PUMP WITH 30 FEET OF HOSE AND SPECIAL NOZZLE NEEDED.



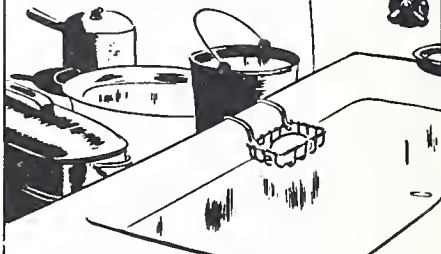
SPRAY ON BOMB

A THIRD PERSON IS MOST USEFUL TO CHECK OTHER POINTS FOR FLAME, REPLENISH WATER, AND RELIEVE PUMPER.

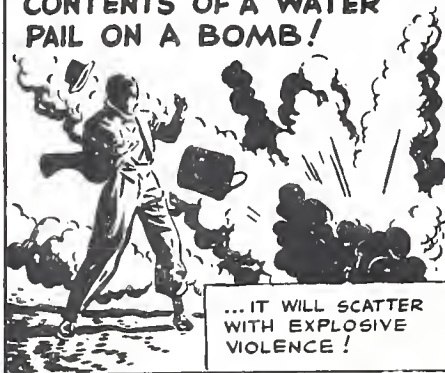


AMPLE STORAGE OF WATER SHOULD BE PROVIDED IN ADVANCE, AS WATER MAINS MAY BE BROKEN BY HIGH EXPLOSIVES AND PRESSURE LOST! FILL THE TUB, EXTRA PAILS AND DON'T FORGET IN A PINCH —

THE CONTENTS OF HOT WATER OR HEATING BOILERS!



NEVER THROW THE CONTENTS OF A WATER PAIL ON A BOMB!



...IT WILL SCATTER WITH EXPLOSIVE VIOLENCE!

IF CONTROL OF THE BOMB SEEMS DOUBTFUL, HAVE AN ALARM TURNED IN, BUT CONTINUE FIGHTING THE BOMB UNTIL HELP ARRIVES OR SUPPLIES ARE EXHAUSTED!



1 LEARN NOW HOW TO CALL



2 LEARN NOW LOCATION OF NEAREST ALARM...

McLaren
Camp

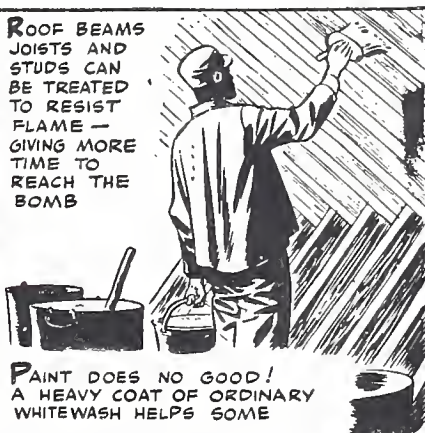
bomb. The following illustrations summarize its action upon impact and ignition and the two principal methods for controlling the bomb.

FIRE DEFENSE

IT WILL BE VERY DIFFICULT TO FIGHT A MAGNESIUM BOMB UNLESS SOME WORK IS DONE BEFORE THE ATTACK



ROOF BEAMS JOISTS AND STUDS CAN BE TREATED TO RESIST FLAME — GIVING MORE TIME TO REACH THE BOMB



FIRE RESISTANT COATING

1½ POUND CHINA CLAY
1½ POUND WATER GLASS
(SODIUM SILICATE)

MIX TO A SYRUP
ADD ONE PINT OF WATER
APPLY LIBERALLY

— IF THESE MATERIALS CAN BE OBTAINED, THEY ARE SUPERIOR TO WHITEWASH.

A ¾ INCH PLASTER LAYER ON THE FLOOR OR 3 INCHES OF DRY SAND EARTH OR FURNACE ASHES HELPS...



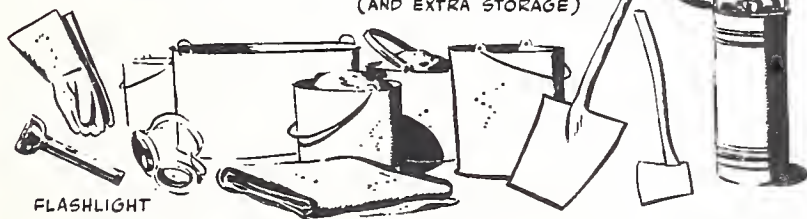
NEXT, ASSEMBLE YOUR BOMB FIGHTING EQUIPMENT... PUT IT WHERE YOU CAN QUICKLY GET IT ON YOUR WAY TO THE TOP FLOOR OR ATTIC... NOT UP THERE! PRACTICE PICKING IT UP ON THE RUN!

HERE'S COMPLETE EQUIPMENT:

HEAVY GOGGLES
HEAVY GLOVES
TWO BUCKETS OF DRY SAND

LIGHT WEIGHT
LONG - HANDLED
SHOVEL
BUCKETS OF WATER
(AND EXTRA STORAGE)

A PUMP TANK



Other Incendiaries Are Controlled More Easily

Thermit bombs. These consist of a thin metal case filled with thermit (aluminum granules and iron oxide), and range in weight from 10 to 132 pounds. When the thermit is ignited on impact, it reacts violently to form a mass of molten iron which ignites inflammable material with which it comes in contact. Nothing can be done to extinguish the thermit since it contains its own oxygen, but surroundings can be wet to control the spread of fire.

White phosphorus bombs. When these bombs explode, the phosphorus particles are spread over an area of 50 to 100 yards and ignite spontaneously upon contact with air. Phosphorus causes severe burns on contact with the body. It is used mainly against flimsy materials such as wood shingle roofs, ripe grain, and woods. Phosphorus particles can best be extinguished by spraying them with a copper sulphate solution. Water may also be used to keep the phosphorus constantly wet.

Oil bombs. These consist of a huge drum containing liquid or solid oil which is scattered and ignited by a burster charge on impact. Oil fires can be controlled with water if care is taken not to spread the burning oil. Some oil fires can be extinguished by smothering them with sand or by using fire extinguishers.

Incendiary leaves or calling cards. These are four-inch square moist cards treated with a small amount of phosphorus. When they dry they burst into flame. They are particularly effective in firing fields of ripe grain, dry woods, or combustible roofs. They can be extinguished by immersing them in water or copper sulphate solution, or they can be allowed to burn in a safe place.

Be Cautious in Using Fire Extinguishers

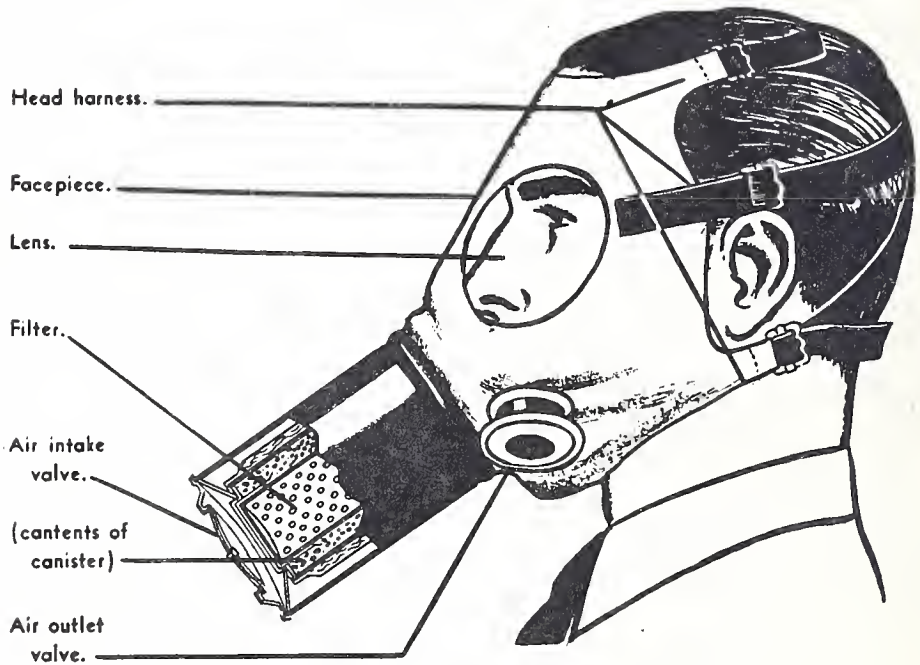
Fire extinguishers are useful in extinguishing fires caused by incendiary bombs, but they may not be suitable for putting out the bomb itself. If the label says that the contents include carbon tetrachloride, the extinguisher must not be used under any circumstances on magnesium bombs. Dangerous gases are generated when carbon tetrachloride comes in contact with magnesium.

All water-type extinguishers are suitable for controlling incendiaries. If the label says "soda-acid," it is a water-type extinguisher. To get a spray effect, put the thumb over the nozzle; use the jet on surrounding fires. One extinguisher is not enough to burn out a mag-

nesium bomb. It is best to have sand or pump-bucket equipment handy to be used in controlling the bomb, and save extinguishers for resulting fires. A foam extinguisher can also be used to control incendiaries.

HOW TO USE A GAS MASK

The civilian gas mask consists of an adjustable, gas-resistant facepiece, fitted with eyepieces and head-harness, and a canister which filters the air.



NONCOMBATANT GAS MASK

Putting On and Adjusting the Mask



To remove mask from carrier, place left hand around bottom of carrier, and open cover flap with right hand.



Bring mask up in front of face. Grasp facepiece in both hands with thumbs inside and below lower head-harness strap and with fingers on outside of facepiece. Open up mask with thumbs.



Thrust chin up and out. Put mask over chin and then rest of face.



Pull head-harness down on back of head. Brush hair back so mask will rest on face. Adjust mask on face.



Place left hand over outlet valve and exhale, emptying lungs. This forces out any gas inside facepiece. Start breathing normally.



Test for leakage by placing palm over inlet valve and breathing in. Facepiece should collapse on face unless fit is loose or there is leakage.

Removing the Mask



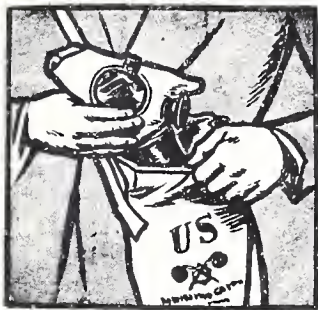
Always test for gas before removing mask. Take full breath, exhale part, then hold breath. Stoop down and forward. Insert 2 fingers between face and facepiece, let air enter. Sniff for gas. If none, remove mask.



Grasp canister just below facepiece. Bend head forward slightly, pull mask outward and upward off head.



Hold mask in right hand and fold head-harness inside.



Replace mask in carrier and close flap.

Inspecting the Mask



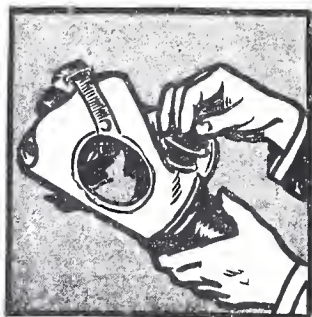
Examine facepiece carefully for pinholes, cracks, or tears by holding it up to a strong light. Examine chin seam for rips. Stop any leaks with adhesive tape.



Examine head-harness buckles for breakage and straps for tears.



Examine inlet valve. Rubber disk must not stick to valve seat, must retain elasticity. If hardened or cracked, it must be replaced.



Examine outlet valve in same way as inlet valve.



Examine carrier for holes, other signs of wear.

WAR GASES

At this writing, war gases have not been used against the British or others trained to protect themselves. They have been used against the Ethiopians and the Chinese.

A gas-tight room suitably located offers fair protection against any probable concentration of war gas in a city. For those whose duties take them into the streets a gas mask offers full protection against all but the "blister gases." For protection against mustard or lewisite, full protective clothing is needed.

War gases may be dropped in bombs or simple containers, and liquid vesicants may also be sprayed by airplanes.

The gas warning is a "percussion sound"—that is, bells, drums, hand rattles, rapidly struck resonant objects of any kind. The spreading of an alarm is the responsibility of the wardens.

Householders Gas-Proof Refuge Room

War gases hug the ground, flow into cellars and basements. Upper floors of a dwelling are usually sufficient protection against dangerous concentrations. If all openings and cracks are closed, a room three stories from the ground will offer good protection against war gases.

To seal cracks and small openings, tape of various kinds may be used. A pulp made by soaking newspapers in water, or patching plaster may be used for caulking larger openings. Pieces of wall

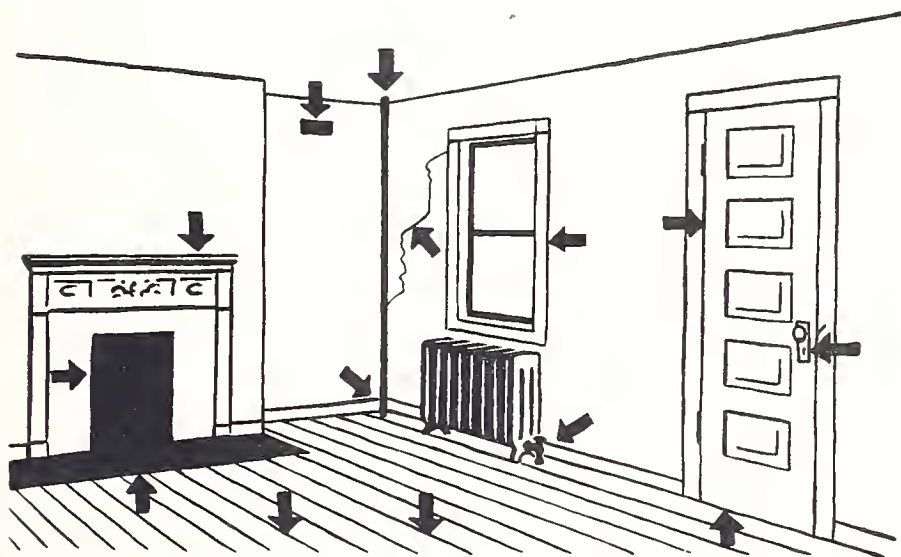
board, nails and caulking material should be kept handy to cover windows broken by the blasts of high explosives.

One door may be used as an entrance by fastening a blanket over it in such a way as to seal it tightly when no one is going in or out. If soaked in oil to close the air spaces, the blanket is more effective.

The refuge room should contain supplies of food, and water, chairs, a battery-operated radio, a flashlight, and some sort of toilet facilities.

Allow 20 square feet of floor space for each person who is to occupy an average room with a ceiling nine feet high. This will give enough air for ten hours of occupancy.

The illustration shows where to stop up cracks, how to hang the blanket at the entrance door.



All cracks and openings should be sealed to gasproof a room. Arrows show where to look for cracks and leaks.















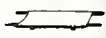

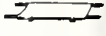



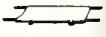







GASPROOFING REFUGE ROOM

CHEMICAL WARFARE AGENTS

GENERAL INSTRUCTIONS

The importance of proper first aid for gas victims cannot be overemphasized. The following are general rules which apply in all cases.

A. Act promptly and quietly; be calm.

CLASS	NAMES AND SYMBOLS	FORM	ODOR	PHYSIOLOGICAL EFFECT	TACTICAL CLASS
VESICANTS	MUSTARD <small>DI-CHLORETHYL SULFIDE</small> $S(CH_2CH_2)_2Cl_2$	LIQUID AND VAPOR	 Garlic, Horseradish, Mustard	Delayed effect. Burns skin or membrane. Inflammation respiratory tract leading to pneumonia. Eye irritation, conjunctivitis.	
	LEWISITE <small>CHLOROVINYL-DICHLORARSINE</small> $CHClCH=AsCl_2$	LIQUID AND VAPOR	 Germans	Burning or irritation of eyes, nasal passages, respiratory tract, skin. Arsenical poison.	
	ETHYLCHLORARSINE $C_2H_5AsCl_2$	LIQUID AND VAPOR OR GAS	 Strychnine, like pepper in nose	Causes blisters, sores, paralysis of hands, vomiting. Severe on long exposure.	
LUNG IRRITANTS	CHLORINE Cl_2	GAS	Highly Pungent	Long irritant.	
	CHLORPICRIN <small>NITROCHLOROFORM</small> CCl_3NO_2	GAS	 Flypaper, anise	Causes severe coughing, crying, vomiting.	
	DIPHOSGENE <small>TRICHLORMETHYLENE CHLOROFORMATE</small> $ClCOCOC-Cl$	GAS	 Eastgate, Acid	Causes coughing, breathing hurts, eyes water, toxic.	
	PHOSGENE <small>CARBONYL CHLORIDE</small> $COCl_2$	GAS	 Musty hay, Green corn	Irritation of lungs, occasional vomiting, tears in eyes, doped feeling. Occasionally symptoms delayed. Later, collapse, heart failure.	
LACRIMATORS	CHLORACETOPHENONE $C_6H_5CO-CH_2Cl$	GAS	 Apple Blossoms	Makes eyes smart. Shut tightly. Tears flow. Temporary.	
	BROMBENZYL CYANIDE $C_6H_5CH-BrCN$	GAS	 Sour Fruit	Eyes smart, shut, tears flow. Effect lasts some time. Headache.	
STERNUTATORS	ADAMSITE <small>DIPHENYLAMINECHLORARSINE</small> $(C_6H_5)_2NHAsCl$	GAS	 Coal Smoke	Causes sneezing, sick depressed feeling, headache.	
	DIPHENYLCHLORARSINE $(C_6H_5)_2AsCl$	SMOKE	 Shoe Polish	Causes sick feeling and headache.	
SMOKES	H C MIXTURE $ZN + Cl_2$	SMOKE	Sharp Acid	Harmless.	
	SULPHUR TRIOXIDE <small>IN CHLORSULFONIC ACID</small> $SO_2 + SO_2HCl$	SMOKE	 Burning matches	Causes prickling of skin, flow of tears.	
	TITANIUMTETRACHLORIDE $TiCl_4$	SMOKE	Acid	Harmless.	
INCENDIARIES	WHITE PHOSPHORUS P	SMOKE	 Burning matches	Burning pieces adhere to skin, clothing.	
	THERMIT $8Al + 3FeO_4$	INCENDIARY	None	5,000 degree heat ignites materials.	













B. Put a gas mask on the patient if gas is still present if he has a mask on, check to see that his is properly adjusted. If a mask is not available, wet a handkerchief other cloth and have him breathe through it.

C. Keep the patient at absolute rest; loosen clothing facilitate breathing.

D. Remove the patient to a gas-free place as soon as possible.

E. Summon medical aid promptly; if possible, send the victim to a hospital.

F. Do not permit the patient to smoke, as this causes coughing and, hence, exertion.

DETECTION	FIRST AID (After removal from gassed area)	PERSISTENCE	FIELD NEUTRALIZATION
	Undress; remove liquid mustard with protective ointment, bleach paste, or kerosene; bathe; wash eyes and nose with soda solution.	One day to one week. Longer if dry or cold.	Cover with unslaked lime and earth. 3% solution of Na ₂ SO ₃ .
	Undress; remove liquid Lewisite with hydrogen peroxide, lye in glycerine, or kerosene; bathe; wash eyes and nose with soda. Rest—Doctor.	One day to one week. Longer if dry or cold.	Wash down with water. Cover with earth. Alcohol. NaOH spray.
	Undress; remove liquid with hydrogen peroxide, lye in glycerine, or kerosene; bathe; wash eyes and nose with soda. Rest—Doctor.	One hour.	Cover with earth, caustic.
	Remove from gassed area. Keep quiet and warm. Coffee as stimulant.	10 minutes.	Alkaline solution.
	Wash eyes, keep quiet and warm. Do not use bandages.	Open 6 hours. Woods 12 hours.	NaSO ₃ —Sodium sulfite in alcohol solution.
	Keep quiet and warm. Give coffee as a stimulant.	30 minutes.	Alkali.
	Keep quiet and warm, bed rest. Coffee as a stimulant. Loosen clothing. No alcohol or cigarettes.	10 to 30 minutes.	Alkali.
	Wash eyes with cold water or boric acid solution. Do not bandage. Face wind. For skin, sodium sulphate solution.	10 minutes.	Strong, hot solution of sodium carbonate.
	Wash eyes with boric acid. Do not bandage.	Several days. (Weeks in winter.)	Alcoholic sodium hydroxide spray.
	Keep quiet and warm. Loosen clothing. Reassure. Spray nose with neo-synephrin or sniff bleaching powder. Aspirin for headache.	10 minutes.	Bleaching powder solution.
	Remove to pure air, keep quiet. Sniff chlorine from bleaching powder bottle.	Summer 10 minutes.	Bleaching powder solution.
None needed.	Produces no effect requiring treatment.	While burning.	None needed.
	Wash with soda solution.	5 to 10 minutes.	Alkaline solution.
None needed.	Produces no effect requiring treatment.	10 minutes.	None needed.
None needed.	Pack in cloths wet with copper sulphate (blue vitriol) or water or immerse in water. Pick or squeeze out particles. Treat for burn.	10 minutes.	Burns out.
None needed.	Treat for severe burn.	5 minutes.	Quickly cover with earth or sand.

KEY



SMOKE



INCENDIARY



MASK PROTECTION NEEDED



FULL PROTECTIVE CLOTHING NEEDED



FIRST AID TREATMENT



HOSPITAL CASE

PROCEDURE OF AWARD OF FIRST CLASS RATING

The following procedure will be followed in granting First Class Rating to air raid wardens.

1. Special Duty Training Instructors will report to the County Director of Civilian Defense Schools, via the Chairman of the Local Defense Council and the Chairman of the County Defense Council, the names and addresses of air raid wardens who have completed the training.

2. The Chief of Air Raid Warden Service in the Control Center will report to the County Director of Civilian Defense Schools, via the Chairman of the Local Defense Council and the Chairman of the County Defense Council, the names and addresses of wardens who have satisfactorily completed the problems and exercises.

3. The County Director of CD Schools thereupon will authorize the award of the black pyramid, insignia of First Class Rating, to those wardens who have met with the requirements.

SPECIAL DUTY MANUAL FOR AIR RAID WARDENS

